R E M A R K S

Careful review and examination of the subject application are noted and appreciated.

SUPPORT FOR CLAIM AMENDMENTS

Support for the amendments to the claims can be found in the drawings as originally filed. For example, FIG. 2 provides an illustration of a pre-decoder 100 having an input receiving bitstream A and an output presenting bitstream B to a decoder 110. Support for the amendments to the claims can also be found in the specification as originally filed. For example, on page 6, line 1 through page 7, line 2 of the specification which describes FIG. 2 and on page 4, lines 11-17, of the specification which recites "The objects, features and advantages of the present invention include providing a method and/or apparatus for decoding an intra-only MPEG-2 stream composed of two separate fields encoded as a special frame picture that may (i) transform an intra-only, frame picture encoded bitstream into a secondary format and/or (ii) provide a bitstream format that can be decoded as interlaced field pictures by a standard, MPEG-2 compliant decoder." As such, no new matter has been introduced.

CLAIM REJECTIONS UNDER 35 U.S.C. §103

The rejection of claims 1-6, 9-16, and 19-22 under 35 U.S.C. §103(a) as being unpatentable over Gryskiewicz et al. (U.S. Patent No. 6,392,712; herein after Gryskiewicz) in view of Boyce et al. (U.S. Patent No. 5,592,299; hereinafter Boyce) and Kim et al. (U.S. Patent No. 5,926,573; hereinafter Kim) and further in view of the background of the present application has been obviated by amendment and should be withdrawn.

Gryskiewicz concerns synchronizing interlaced and progressive video signals (Title of Gryskiewicz). Boyce concerns a method and apparatus for reducing the amount of data required to represent a video frame (Title of Boyce). Kim concerns an MPEG bit-stream format converter for changing resolution (Title of Kim).

In contrast to the cited references, the claim 1 provides a method for decoding a bitstream including the steps of (A) receiving a first encoded bitstream at an input of a pre-decoder, where the first encoded bitstream is an intra-only frame picture encoded bitstream comprising a frame header and alternating macroblock rows, with each macroblock row containing encoded data for a plurality of vertical lines from a single respective field of a frame picture encoded in said first encoded bitstream, (C) storing the first field header and macroblock rows containing the encoded data for the plurality of vertical lines from a first field of the frame picture in a first buffer of the pre-decoder and

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storing the second field header and macroblock rows containing the encoded data for the plurality of vertical lines from a second field of the frame picture in a second buffer of the pre-decoder, where the encoded data for the plurality of vertical lines contained in each macroblock row in the first buffer and the second buffer is a copy of the encoded data for the plurality of vertical lines contained in a corresponding macroblock row in the first encoded bitstream, (D) generating a second encoded bitstream using the pre-decoder, the second encoded bitstream comprising (i) the first field header, (ii) the macroblock rows containing the encoded data for the plurality of vertical lines from the first field of the frame picture, (iii) the second field header and (iv) the macroblock rows containing the encoded data for the plurality of vertical lines from the second field of the frame picture, where the second encoded bitstream is an intra-only field picture encoded bitstream, and (E) presenting said second encoded bitstream to an input of a standard, MPEG-2 compliant decoder, wherein said second encoded bitstream is decoded as interlaced field pictures. Claims 10 and 11 recite limitations that are similar to the limitations recited in claim 1.

The combination of Gryskiewicz, Boyce and Kim does not teach or suggest an input signal to a pre-decoder is required to be an intra-only frame picture encoded bitstream, an output signal from the pre-decoder to a standard, MPEG-2 compliant decoder is

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required to be an intra-only field picture encoded bitstream, and the encoded data for the plurality of vertical lines contained in each macroblock row of each field is a copy of the encoded data for the plurality of vertical lines contained in a corresponding macroblock row in the first encoded bitstream, as presently claimed. Therefore, the combination of Gryskiewicz, Boyce and Kim does not teach or suggest each and every element of the presently claimed invention, as required to support a conclusion of obviousness under MPEP §2143. As such, the presently claimed invention is fully patentable over the cited references and the rejections should be withdrawn.

Specifically, each of the references Gryskiewicz, Boyce and Kim disclose that the input signals contain both intra and inter coding. FIG. 1 of Gryskiewicz shows an interlaced video data stream 120. However, Gryskiewicz appears silent regarding the input stream 120 being an intra-only frame picture encoded bitstream. Instead, Gryskiewicz states that the incoming video data stream 120 transmits an odd field in a first time period followed by transmission of an even field in a second time period (see column 4, lines 21-31 of Gryskiewicz). Similarly, Boyce describes an input signal being received as being able to have both intra (I) and inter (P) predicted fields (see column 6, lines 27-43 of Boyce). Kim also indicates receiving input signals with both intra- and nonintra-prediction (see, e.g., FIG. 2 and column 6,

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lines 1-11 of Kim). Therefore, the combination of Gryskiewicz, Boyce and Kim does not teach or suggest an input signal to a pre-decoder is an intra-only frame picture encoded bitstream, as presently claimed. As such, the presently claimed invention is fully patentable over the cited references and the rejections should be withdrawn.

The combination of Gryskiewicz, Boyce and Kim also does not require an output signal from the pre-decoder to a decoder comprising a standard, MPEG-2 compliant decoder is required to be an intra-only field picture encoded bitstream, as presently claimed. Specifically, Gryskiewicz appears silent regarding a requirement that an output signal from the pre-decoder to a decoder comprising a standard, MPEG-2 compliant decoder be an intra-only field picture encoded bitstream. Boyce indicates that output field pictures can be both intra or predictively coded fields (column 6, lines 33-43 of Boyce). Kim also indicates that converted macroblocks can be intra or predictively coded (see, e.g., column 3, lines 14-50 of Kim). Therefore, the combination of Gryskiewicz, Boyce and Kim does not teach or suggest an output signal from the pre-decoder to a decoder comprising a standard, MPEG-2 compliant decoder is an intra-only field picture encoded bitstream, as presently claimed.

Furthermore, since the bitstreams of Gryskiewicz, Boyce and Kim are not required to necessarily be intra-only frame picture

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or field picture bitstreams, Gryskiewicz, Boyce and Kim do not inherently teach or suggest an input signal to a pre-decoder is an intra-only frame picture encoded bitstream and an output signal from the pre-decoder to a decoder comprising a standard, MPEG-2 compliant decoder is an intra-only field picture encoded bitstream, as presently claimed. Inherency requires certainty of results, not mere possibility (See, e.g., *Ethyl Molded Products Co. v. Betts Package, Inc.*, 9 U.S.P.Q. 2d 1001 (E.D.Ky 1988)). Therefore, the combination of Gryskiewicz, Boyce and Kim does not teach or suggest each and every element of the presently claimed invention, as required to support a conclusion of obviousness under MPEP §2143. As such, the presently claimed invention is fully patentable over the cited references and the rejections should be withdrawn.

Furthermore, Gryskiewicz, Boyce and Kim involve changing the coding and/or the amount of video data from an input stream to an output stream. In particular, Gryskiewicz uses a decoder 102 to decode an interlaced video data stream 120 to obtain the decoded odd and even video fields (124a and 124b). The decoded odd and even video fields are combined into a progressive video frame 122. The progressive video frame 122 is mixed with another progressive video frame 130 and sent as an interlaced analog video signal to a display (see FIGS. 1 and 2 and Abstract of Gryskiewicz). Thus, the data for the plurality of vertical lines sent to the analog display is not a copy of the encoded data for the plurality of vertical

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lines contained in a corresponding macroblock row in the data stream 120 of Gryskiewicz, as presently claimed.

Boyce does not cure the deficiencies of Gryskiewicz. Specifically, Boyce describes representing a video frame (or frame picture) with a single field, rather than copying both fields of the frame picture for decoding as two field pictures, as presently claimed. For example, Boyce states that the data reduction circuit 110 processes the video frame data to reduce the amount of data to produce a low resolution video frame which uses less data than the corresponding received video frame (see, e.g., column 5, lines 50-60 of Boyce). Since the data reduction circuit 110 processes the video frame data to reduce the amount of data, it follows that the encoded data for the plurality of vertical lines contained in an MPEG-2 output data stream of Boyce is not a copy of the encoded data for the plurality of vertical lines contained in a corresponding macroblock row in the first encoded bitstream, as presently claimed.

Kim does not cure the deficiencies of Gryskiewicz and Boyce. Specifically, Kim discloses an apparatus for transforming the resolution of an image from a first image resolution to a second image resolution using operations in the spatial frequency domain (Abstract of Kim). The apparatus converts the bitstream format which defines the first image and can be used to change the resolution of an MPEG encoded video signal by generating converted

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macroblocks from original macroblocks (Abstract of Kim). Since Kim discloses changing the resolution of the MPEG encoded video signal by generating converted macroblocks from original macroblocks, it follows that the encoded data for the plurality of vertical lines contained in the MPEG bit-stream of Kim is not a copy of the encoded data for the plurality of vertical lines contained in a corresponding macroblock row in the first encoded bitstream, as presently claimed. Therefore, the combination of Gryskiewicz, Boyce and Kim does not teach or suggest each and every element of the presently claimed invention, as required to support a conclusion of obviousness under MPEP §2143. As such, the presently claimed invention is fully patentable over the cited references and the rejections should be withdrawn.

Furthermore, modification of Gryskiewicz, Boyce and Kim to copy the encoded data for the plurality of vertical lines contained in an input MPEG bit-stream, as presently claimed, would make the inventions of Gryskiewicz, Boyce and Kim unsuitable for their intended purpose (i.e., changing the coding and/or amount of video data from an input stream to an output stream). Therefore, Gryskiewicz, Boyce and Kim do not provide the suggestion or motivation for such modification (MPEP §2143.01(V)). Thus, the combination of Gryskiewicz, Boyce and Kim does not teach or suggest each and every element of the presently claimed invention, as required to support a conclusion of obviousness under MPEP §2143.

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As such, the presently claimed invention is fully patentable over the cited references and the rejections should be withdrawn.

Furthermore, Applicant's representative traverses the inferences that an intra-only field picture encoded bitstream is inherent in the cited references (see page 4, line 21 through page 5, line 2 and page 6, lines 12-16 of the Office Action). Inherency requires certainty of results, not mere possibility. See, e.g., *Ethyl Molded Products Co. v. Betts Package, Inc.*, 9 U.S.P.Q. 2d 1001 (E.D.Ky 1988). Thus, merely because it is possible for an MPEG bitstream to be intra-only encoded does not make it inherent in the cited references unless it is necessarily certain that the bitstreams manipulated by Gryskiewicz, Boyce and Kim MUST be intra-only encoded. The references clearly do not require intra-only bitstreams because all of the references refer to bitstreams including both intra coded and predictively coded macroblocks, fields and frames.

Furthermore, with respect to the statement that it is "inherent that the recorded bitstream of Boyce is provided to a decoder configured to support a field picture in order to perform trick play," Applicant's representative respectfully requests that the Examiner provide objective evidence that Boyce requires a standard, MPEG-2 compliant decoder, as presently claimed, in order to perform trick play. Inherency requires certainty of results,

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not mere possibility. See, e.g., *Ethyl Molded Products Co. v. Betts Package, Inc.*, 9 U.S.P.Q. 2d 1001 (E.D.Ky 1988).

Furthermore, with respect to the rejection of claims 10, 11, 19 and 20, the Office Action states that the cited references do not explicitly disclose implementing such a decoder in a circuit, and then goes on to take official notice that it is well known to do so. The Office Action does not appear to have made the required findings of fact and analysis required to support a conclusion of obviousness based upon gaining the advantage of a machine implemented decoder. As such, the presently claimed invention is fully patentable over the cited references and the rejections should be withdrawn.
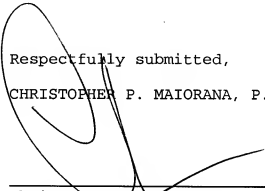
Claims 2-6, 9, 12-16, and 19-22 depend, directly or indirectly, from either claim 1 or claim 11 which are believed to be allowable. As such, the presently claimed invention is fully patentable over the cited reference and the rejection should be withdrawn.

New claims 23-25 depend directly from either claim 1 or claim 11 which are believed to be allowable. As such, the presently claimed invention is fully patentable over the cited references.

Accordingly, the present application is in condition for allowance. Early and favorable action by the Examiner is respectfully solicited.

The Examiner is respectfully invited to call the Applicant's representative between the hours of 9 a.m. and 5 p.m. ET at 586-498-0670 should it be deemed beneficial to further advance prosecution of the application.

If any additional fees are due, please charge Deposit Account No. 50-0541.

Respectfully submitted,

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Dated: June 17, 2010

c/o Pete Scott
LSI Corporation

Docket No.: 02-6421 / 1496.00304